

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) An imaging device comprising:
 - a) a means for illuminating at least one illumination point on an observed zone of an observed plane by means of an illumination light beam,
 - b) a means for selecting, in the light coming from the observed plane, the light coming from said illumination point,
means for selecting, in the light coming from the observed plane, the light coming from a band surrounding said illumination point,
 - c) a means for forming an image of said illumination point from the selected light coming from said illumination point and forming an image of said band from the selected light coming from said band.
 - d) a scanning system arranged so as to simultaneously displace ~~for displacing~~ said illumination point on the observed zone and for simultaneously displacing the image of said illumination point, in order to scan an observed zone and to form a first image of the observed zone, the scanning system is further arranged so as to simultaneously displace said illumination point and the image of said band, in order to form a second image of the observed zone from the selected light coming from said band.
 - e) a sensor system operatively configured to detect which detects the first image and the second image, and characterized in that:
 - f) it comprises a means for selecting, in the light coming from the observed plane, the light coming from a band surrounding said illumination point,
 - g) it comprises a means for forming an image of said band from the selected light coming from said band,

- h) the scanning system is arranged so as to simultaneously displace said illumination point and the image of said band, in order to form a second image of the observed zone from the selected light coming from said band;
 - i) it comprises a sensor which detects the second image;
 - j) it comprises a means for combining the first and second images of the observed zone to form a third image of the observed zone.
- 2. (Currently Amended) The device as claimed in claim 1 wherein, characterized in that said means for combining said first and second images is operatively configured to determine the difference between the first image modified by a first multiplier coefficient and the second image modified by a second multiplier coefficient.
- 3. (Currently Amended) The device as claimed in claim 1 wherein, characterized in that said band comprises [[is]] a ring that is concentric to said illumination points.
- 4. (Currently Amended) The device as claimed in claim 1 further comprising, characterized in that it comprises a plurality of illumination points and a plurality of bands, each of said bands surrounding a corresponding illumination point.
- 5. (Currently Amended) The device as claimed in claim 4 wherein, characterized in that the means for illuminating the plurality of illumination points comprises an array of microlenses which separate a laser beam into a plurality of subbeams, each focused on one illumination point.
- 6. (Currently Amended) The device as claimed in claim 1 wherein the illumination point comprises, characterized in that it comprises a single illumination point, and in that the means for illuminating the illumination point comprises a lens which focuses a laser beam on the illumination point.

7. (Currently Amended) The device as claimed in claim 1-wherein, characterized in that the means for selecting the light consists of the superposition of a first opaque plate comprising at least one transparent disk and of a second opaque plate comprising at least one transparent disk and at least one transparent ring, as well as [[a]] means for moving the second plate in translation with respect to the first plate, so as to bring the disk of the second plate opposite the disk of the first plate during acquisition of the first image and so as to then bring the ring of the second plate opposite the disk of the first plate during acquisition of the second image.
8. (Currently Amended) The device as claimed in claim 4 wherein, characterized in that the means for selecting the light comprises a mask composed of transparent or reflective microprisms that form a first beam by sending which make it possible to send in a first direction the light coming from the illumination points and constituting a first beam and form a second beam by sending to send in a second direction the light coming from the bands and constituting a second beam, the device further comprises [[a]] means for forming the first image from the first beam, and the device comprises a means for forming the second image from the second beam.
9. (Currently Amended). The device as claimed in claim 8 further comprising, characterized in that it comprises:
an intermediate lens for sending the first and the second beam into a separation zone where they are spatially separated, and
at least one of: a prism and a or-one mirror which is placed in the separation zone, in order to modify the direction of at least one of the first and second beams.

10. (Currently Amended) The device as claimed in claim 9 further comprising, characterized in that it comprises a lens which is simultaneously passed through by the first and the second beam after the separation zone, and which forms the first and the second image in two distinct zones of the same image plane.
11. (Currently Amended) The device as claimed in claim 8 further comprising, characterized in that: it comprises a first aperture diaphragm which is passed through by the illumination light beam before reaching it reaches the mask composed of transparent or reflective microprisms, it comprises a second aperture diaphragm which is passed through by the illumination light beam coming from the mask and directed toward the observed object, and wherein the first aperture diaphragm is positioned such that the part of the illumination beam which reaches a zone of the mask which transmits said second beam is then stopped by the second aperture diaphragm, and such that the part of the illumination beam which reaches a zone of the mask which transmits said first beam then passes through the second aperture diaphragm.
12. (Currently Amended) The device as claimed in claim 1 wherein each means for selecting comprises, characterized in that the selection means are fixed masks and in that the scanning system consists of a moveable mirror.

Claims 13 to 22. (canceled)

- 23 (Currently Amended) An imaging method comprising [[the]] steps of:
[[a]] illuminating at least one illumination point on an observed zone of an
observed plane,
[[b]] selecting, in the light coming from the observed plane, the light coming from
said illumination point,
[[c]] forming an image of said illumination point from the selected light coming
from said illumination point,
[[d]] displacing said illumination point on the observed zone and simultaneously
displacing the image of said illumination point, in order to scan an
observed zone and form a first image of the observed zone,
[[e]] detecting the first image,
~~characterized in that it comprises the steps of:~~
[[f]] selecting, in the light coming from the observed plane, the light coming from
a band surrounding said illumination point,
[[g]] forming an image of said band from the selected light coming from said
band,
[[h]] simultaneously displacing said illumination point and the image of said
band, in order to form a second image of the observed zone from the
selected light coming from said band,
[[i]] detecting the second image, and
[[j]] combining the first and second images of the observed zone to form a third
image of the observed zone.
24. (Currently Amended) The method as claimed in claim 23 wherein,
~~characterized in that said combining step comprises determining a difference between the first image modified by a first multiplier coefficient and the second image modified by a second multiplier coefficient.~~

25. (Currently Amended) The method as claimed in claim 23 wherein, characterized in that said band comprises [[is]] a ring that is concentric to said illumination points.
26. (Currently Amended) The method as claimed in claim 3 wherein, characterized in that the illuminating step comprises of illuminating at least one illumination point is a step of illuminating a plurality of illumination points, each illumination point being surrounded by a corresponding band, and wherein the step of detecting the light coming from a band comprises detecting detects the light coming from each of the bands corresponding to each illumination point.
27. (Previously presented) The device of claim 1, further comprising means to select, in the light coming from the observed plane, light having a different wavelength than the illumination light beam, to generate a fluorescence image.
28. (Previously presented) The method of claim 23, wherein each step of selecting further selects light having a different wavelength than the wavelength of the light used for illuminating the observed plane, to generate a fluorescence image.
29. (New) The device of claim 1 wherein the sensor system comprises one of: (i) a single sensor configured to detect both the first and second image, and (ii) a first sensor configured to detect the first image and a second sensor configured to detect the second image.